DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-003983
Date Inspected: 16-Sep-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 900
OSM Departure Time: 1700
Location: Muroran, Japan

CWI Name: Kuan Chung

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower,Jacking and Deviation Saddle

Summary of Items Observed:

The following report is based on METS observations at Japan Steel Works (JSW) in Muroran Japan. Current work: Casting, machining and repair of Saddles.

Fabrication Shop # 4

On this date the QA representative Dong J. Shin arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW fabrication shop # 4. QA Inspector observed Mr. M. Yamashita, (A Shift) and Mr. Y. Arai, (A Shift) welding on T1-1 fill pass, (60%-100%) of weld joint 7Y-9V(1-2) and 7Y-9V(1-3). The welding of the stem plate to rib plate, FCAW welding was performed utilizing the Flux Core Arc Welding (FCAW) process with dual shield as per the welding procedure specification (WPS) SJ-3012-3. The welding was performed in the 2G (Horizontal) position. The filler metal utilized was identified as 1.6 mm, Class TM 55K2, Brand name Tri Mark. The welding parameters and heat control were monitored by Intertek Testing Services Quality Control (QC) inspector Mr. Chung-Fu Kuan at periodic intervals. The minimum preheat temperature of 160 degrees Celsius and maximum interpass temperature of 260 degrees Celsius was verified to meet the WPS requirements by Mr. Kuan and the QA inspector utilizing Tempilstick temperature indicators. This data was entered into the QC inspector's daily log, identifying the location on a weld map. The FCAW welding average amperage and voltage by clamp type meter and travel speed were verified to be within the welding procedure specification parameter range of 311 amps to 355 amps, 34 volts to 37 volts and travel speed of 254 to 310 mm per minute for the 1.6mm wire. The welding was continued to night shift. Visually general welding appears to meet the minimum requirements of the welding procedure specification and contract documents.

WELDING INSPECTION REPORT

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The QA inspector periodically observed The Nikko Inspection Services (NIS) QC/NDT technicians Mr. Kazuya Kobayashi and Mr. Kumagai perform magnetic particle (MT) testing of West Deviation Saddle base W2E2 after PWHT. The MT was performed in accordance with ASTM standard E709, using the yoke method. The yoke utilized appeared to be model VM3, serial number 97049. The yoke dead lift was verified with a 4.65kg test plate. The magnetic field was verified with a field indicating gauge (pie gauge) using red dry powder. All calibrations appear to meet the minimum requirements of ASTM E709. The testing was evaluated in accordance with the contract special provisions. The testing was not completed on this date.

Summary of Conversations:

No specific conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Shin,DJ	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer